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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/678,902	10/04/2000	David M. Modest	6208-9	7225

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Joseph Levi, Esq.
Clifford Chance Clifford Chance Rogers & Wells LLP
200 Park Avenue
New York, NY 10016

EXAMINER
VIG, NARESH

ART UNIT	PAPER NUMBER
3629	

DATE MAILED: 02/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

SK

Office Action Summary	Application No. 09/678,902	Applicant(s) MODEST, DAVID M.
	Examiner Naresh Vig	Art Unit 3629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 October 2000* .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 45* is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

  If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All b)☐ Some * c)☐ None of:

  1.☐ Certified copies of the priority documents have been received.

  2.☐ Certified copies of the priority documents have been received in Application No. _____ .

  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

  a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5)☐ Notice of Informal Patent Application (PTO-152)

3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .   6)☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 – 7, 12 – 14, 18 – 24, 29 – 31, 35 – 39 are rejected under 35

U.S.C. 103(a) as being unpatentable over Marshall US Patent 5,774,878 in view of an

article Lotus 1-2-3 5.0 Linking Data To Geographic maps by Sandhills Publishing

Company hereinafter known as Sandhills.

Regarding claims 1, 5 – 7, 12 – 14, 18, 22 – 24, 29 – 31, 35 and 37 – 39 Marshall

discloses a virtual reality generator having an input module that receives as input

financial information. The virtual reality generator outputs to a display device a virtual

reality world generated from the financial information. The financial information can be

preprocessed by a financial analytic system prior to input to the virtual reality generator.

The financial information can be received from a data file. The virtual reality generator

can dynamically display and continuously update the virtual reality world. Further,

movement through the virtual reality world can be simulated (abstract).

Many financial indicators can be specified by the user using the user interface module. The user is presented with a virtual reality world of selected financial information where location, colors, sounds, shapes and movement all specify financial information that the user has requested information about. (This information may also include information about positions a user has in his or her portfolio.) The user, examining and moving through just one screen (i.e. the virtual reality world in three dimensions) can immediately spot important information. The user can then zoom in on this information (for example by flying to this polygon) and view all the information available about this instrument. This information can be presented on a separate screen or can be presented as part of the virtual reality. If the user flies down and selects an instrument, in an alternative embodiment, the user is able to receive verbal or sound information about the instrument (col. 7, lines 9 – 25).

Referring now to FIGS. 3a-3d, FIG. 3a shows a top perspective 100 of a virtual reality world. In this example, stock markets are the parameters for a first set of a axis 102 and industry groups are parameters for a second set of axis 104. A financial instrument is displayed represented by a metaphor, being a geometric primitive, such as a polygon or cube (e.g. 106 and 108.) The metaphors are, from this perspective, two-dimensional. When the user travels through the virtual reality world, it can be seen that the world and the primitives are in effect three-dimensional. The colors and shape of the metaphor are significant, as discussed above. FIG. 3b shows the same virtual reality world as FIG. 3a from the perspective (100a) of a user moving through the virtual reality world.

Marshall discloses that the user is able to use the virtual reality world generated by the present invention to funnel information and trends from various sources into one object of the virtual reality world (col. 4, lines 1 – 4). Marshall does not disclose using world map as a geographic map. However, Marshall states that "In effect, a virtual reality world created using financial information can be considered as displaying a hybrid of financial information and market geography representing a virtual financial world having terrain categorized and structured to enable a user to easily extract patterns and interconnections. Thus, for example, the geography of the virtual reality world (in the representative embodiment, it is market geography), is defined, in part, by a three dimensional coordinate system that sets out the borders of "geographical" features in the terrain" (col 4, lines 5 – 19). Sandhills discloses that Lotus 1-2-3 Release 5 for Windows lets you link worksheet data with geographic maps. User can display sales information (financial information) for countries throughout the world by linking user's sales data to a world map and producing a visual display that conveys user's information differently than a bar or a line chart. Therefore, it is known at the time of invention to a person with ordinary skill in the art to display financial information on a world map to produce a visual display that conveys user's information differently than a bar or a line chart.

Marshall does not limit what data can be represented using its system. However, Marshall states that "assume that the user has selected as the virtual reality world the stock markets of Tokyo and New York. The user may designate that the three-dimensional virtual reality world be divided into a grid comprising for squares. One of

the axis of the grid will represent the two stock markets, the other axis will represent two

industry groups, such as "financial" and "industrials". Therefore, one square on the grid

represents, for example, New York Industrials. Each square on the grid can be further

divided to represent industry sub-groups for that market. Each stock is represented by a

metaphor, for example, a polygon. The numbers of sides of the polygon can be selected

by the user to represent, for example, the degree of capitalization of the stock. The color

of the polygon can represent, for example, profit or loss. The height of the polygon

(above or below the plane) can represent, for example, the price change or volatility of

the stock. Polygons representing companies that are about to declare a dividend can be

made to spin. Companies in bankruptcy can be represented by a flashing polygon. Each

company's corporate logo can be textured on the top or side of the polygon. Visual

arrow vectors, whose dimensions represent information about financial movement, can

be coupled to a polygon to represent trends. Polygons that spin or blink can represent

the results of the best 50 stocks selected by a certain criteria from a database. Other

visual ques can be used to represent financial information about the stocks, as selected

by the user (col. 6, lines 14 – 44).

Regarding claims 2, 19 and 36, Marshall discloses that an axis display parameter

48 allows the user to set the Z-axis (sometimes called the vertical axis) of the three

dimensional virtual reality world. (The X-axis and and Y-axis are set as discussed below

with reference to FIG. 11.) Generally, the three axes can represent any category of

financial information. For example, one axis can be set to represent countries, a second

axis can be set to represent industry groups and a third axis can be set to represent

price changes. Alternatively, the user could set the first axis to define two stock markets,

for example New York and Tokyo, the second axis to represent two types of stocks, for

example utilities and financial, and the third axis to represent percentage change in

value of the stock over any user defined time period (col. 11, lines 33 – 50).

Regarding claims 3 and 20, Marshall discloses that the virtual reality generator

can dynamically display and continuously update the virtual reality world (abstract).

Regarding claims 4 and 21, Marshall discloses that the CAPRI analytic system

allows a user to define areas of interest from large areas of financial information, and

then create price and volume charts for any stock issue, including futures, stocks,

indexes, currencies, bonds and commodities (col. 5, lines 9 – 13).

Claims 8 – 11, 15 – 17, 25 – 28, 31 – 33, 40 – 45 are rejected under 35

U.S.C. 103(a) as being unpatentable over Marshall US Patent 5,774,878 in view of an

article Lotus 1-2-3 5.0 Linking Data To Geographic maps by Sandhills Publishing

Company hereinafter known as Sandhills in further view of Datek Online supported by

an article from PRNewsWire "Streamer Free Real-Time Stock Quote Service Registers

12,000 Users" hereinafter known as Datek.

Regarding claims 8 – 11, 25 – 28 and 40 – 42, Marshall discloses a color display

parameter 44 may be set to indicate, for example, companies making a profit or a loss.

Thus, a blue metaphor in the virtual reality world may represent a company making a

profit and a red metaphor may represent a company making a loss. (The colors of the

metaphors can be of various shadings, representing degrees of profit and loss.) A

textures display parameter 46 allows the user to set identifying symbols for each object

in the virtual reality world (col. 10, lines 29 – 59). Marshall does not disclose color

associate with change in percentage. However, Marshall discloses that several

incoming data streams can be the source of the financial information for one virtual

reality world. As the financial data changes, the position, shape, color and texture of the

metaphors in the virtual reality world also change (col. 6, lines 49 – 55). PRN discloses

that Datek Online began giving away Streamer to their customers on October 9, 1999.

Streamer is the first free real-time streaming stock quote service made available by a

brokerage firm to anyone with an Internet connection. Streamer allows investors to track

bid, ask and last prices as well as percent change and other information for up to 40

stocks simultaneously. Investors also can set Streamer to alert them when stocks reach

their price targets. Streamer has simple controls and is easy to operate. In addition,

users can customize Streamer's colors, font size and other settings, including the ability

to display quotes as decimals instead of fractions, to optimize their use. Examiner has used streamer. Streamer users green color for the stocks prices going upward, and, uses red color for stocks whose prices are going downward, also, in the view for portfolio, Datek uses grey color to identify with no change or minimal change. Therefore, it is known at the time of invention to a person with ordinary skill in the art to use different color to identify directional changes in profit and loss to help the investor visually analyze the trend in price changes.

Marshall discloses that the shapes, colors, positions, animations and textures of the metaphors can be selected by the user to represent different characteristics of the financial data (col. 6, 46 – 49).

Regarding claims 15 – 17 and 32 – 34 and 43 – 45, Marshall does not disclose numbers as an indicator. Datek discloses using numbers as indicators to show value. Therefore, it is known at the time of invention to a person with ordinary skill in the art to use numbers as indicator to show the current value of the investment.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
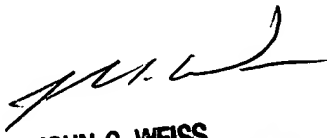
1. Tertiski et al. US Patent 6,493,681

2. Ferguson et al. US Patent 6,064,984

3. Stiegler US Patent 5,774,121

4. Information on MapInfo

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naresh Vig whose telephone number is 703.305.3372. The examiner can normally be reached on M-F 7:30 - 5:00 (Alt Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 703.308.2702. The fax phone numbers for the organization where this application or proceeding is assigned are 703.305.7687 for regular communications and 703.305.7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.3900.

Naresh Vig
January 31, 2003

JOHN G. WEISS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600